



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0209; Directorate Identifier 2012-NM-127-AD; Amendment 39-17514; AD 2013-14-09]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are superseding airworthiness directive (AD) 2012-14-04 for certain Bombardier, Inc. Model DHC-8-100, -200, and -300 series airplanes. AD 2012-14-04 required replacing certain parking brake accumulators. This new AD retains this requirement. This new AD also requires installing restraint devices around the parking brake accumulator end caps. We are issuing this AD to prevent failure of a parking brake accumulator screw cap or end cap resulting in loss of the number 2 hydraulic system and damage to airplane structures, which could adversely affect the controllability of the airplane.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF

PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of August 27, 2012 (77 FR 42956, July 23, 2012).

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7318; fax (516) 794-5531.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2012-14-04, which applies to the specified products. The NPRM was published in the Federal Register on March 26, 2013 (78 FR 18257), and proposed to correct an unsafe condition for the specified products. Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, issued Canadian Airworthiness Directive CF-2011-29R1, dated May 24, 2012 (the Mandatory Continuing Airworthiness Information, referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Seven cases of on-ground hydraulic accumulator screw cap or end cap failure have been experienced on CL-600-2B19 \* \* \* aeroplanes, resulting in loss of the associated hydraulic system and high-energy impact damage to adjacent systems and structure. To date, the lowest number of flight cycles accumulated at the time of failure has been 6991.

Although there have been no failures to date on any DHC-8 aeroplanes, similar accumulators to those installed on the CL-600-2B19, Part Numbers (P/N)08-60162-001 and 08-60162-002 (Parking Brake Accumulator), are installed on the aeroplanes listed in the Applicability section of this [TCCA] directive.

A detailed analysis of the systems and structure in the potential line of trajectory of a failed screw cap/end cap for the accumulator has been conducted. It has identified that the worst-case scenarios would be the loss of number 2 hydraulic system, and damage to aeroplane structures.

This [original TCCA] directive [which corresponds to FAA AD 2012-14-04, Amendment 39-17118 (77 FR 42956, July 23, 2012)] gives instructions to determine the part number and serial number of the existing parking brake accumulator, and where applicable, replace the accumulator.

Revision 1 of this [TCCA] AD mandates the installation of restraint devices around [all] the parking brake accumulator end caps to hold them in place in the event of an end cap failure.

Uncontained failure of the parking brake accumulator screw caps and/or end caps could result in loss of the number 2 hydraulic system, and damage to airplane structures, and could adversely affect the controllability of the airplane. You may obtain further information by examining the MCAI in the AD docket.

## **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (78 FR 18257 March 26, 2013) or on the determination of the cost to the public.

## **Conclusion**

We reviewed the available data and determined that air safety and the public interest require adopting this AD as proposed—except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 18257 March 26, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 18257 March 26, 2013).

## **Costs of Compliance**

We estimate that this AD will affect about 129 products of U.S. registry.

The actions that were required by AD 2012-14-04, Amendment 39-17118 (77 FR 42956, July 23, 2012), and retained in this AD take about 2 work-hours per product, at an average labor rate of \$85 per work-hour. Based on these figures, the estimated cost of the currently required actions is \$170 per product.

We estimate that it will take about 15 work-hours per product to comply with the new basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$5,302 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be

no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$848,433, or \$6,577 per product.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2012-14-04, Amendment 39-17118 (77 FR 42956, July 23, 2012), and adding the following new AD:

**2013-14-09 Bombardier, Inc.:** Amendment 39-17514. Docket No. FAA-2013-0209; Directorate Identifier 2012-NM-127-AD.

#### **(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD supersedes AD 2012-14-04, Amendment 39-17118 (77 FR 42956, July 23, 2012).

#### **(c) Applicability**

This AD applies to Bombardier, Inc. Model DHC-8-101, -102, -103, -106, -201, -202, -301, -311, and -315 airplanes, certificated in any category, serial numbers 003 and subsequent.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

#### **(e) Reason**

This AD was prompted by reports of hydraulic accumulator screw cap or end cap failure. We are issuing this AD to prevent failure of a parking brake accumulator screw

cap or end cap resulting in loss of the number 2 hydraulic system and damage to airplane structures, which could adversely affect the controllability of the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Retained Inspection and Replacement**

This paragraph restates the requirements of paragraph (g) of AD 2012-14-04, Amendment 39-17118 (77 FR 42956, July 23, 2012), with no changes. Within 2,000 flight hours or 12 months after August 27, 2012 (the effective date of AD 2012-14-04), whichever occurs first: Inspect to determine the part number (P/N) and serial number of the parking brake hydraulic accumulator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-170, dated February 25, 2011. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and serial number of the parking brake hydraulic accumulator can be conclusively determined from that review.

(1) For accumulators not having P/N 0860162001 or 0860162002: No further action is required by this paragraph.

(2) For accumulators having P/N 0860162001 or 0860162002: Before further flight, do the applicable actions specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this AD.

(i) If the serial number is listed in the table in paragraph 3.B.(2) of Bombardier Service Bulletin 8-32-170, dated February 25, 2011: No further action is required by this paragraph.



(ii) If the serial number is not listed in the table in paragraph 3.B.(2) of Bombardier Service Bulletin 8-32-170, dated February 25, 2011: Within 2,000 flight hours or 12 months after August 27, 2012 (the effective date of AD 2012-14-04, Amendment 39-17118 (77 FR 42956, July 23, 2012)), whichever occurs first, replace the accumulator with a new non-suspect accumulator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-172, dated March 15, 2011.

**(h) Retained Parts Installation Prohibition**

This paragraph restates the requirements of paragraph (h) of AD 2012-14-04, Amendment 39-17118 (77 FR 42956, July 23, 2012), with no changes. As of August 27, 2012 (the effective date of AD 2012-14-04), no person may install a parking brake accumulator, P/N 0860162001 or 0860162002 with a serial number that is not listed in the table in paragraph 3.B.(2) of Bombardier Service Bulletin 8-32-170, dated February 25, 2011, on any airplane.

**(i) New Requirement of this AD: Install Restraint Devices on All Airplanes**

Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first: Install restraint devices around the parking brake hydraulic accumulator end caps by incorporating Bombardier ModSum 8Q101901, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-169, Revision A, dated December 16, 2011.

**(j) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-32-169, dated November 25, 2011, which is not incorporated by reference in this AD.

**(k) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of

Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(l) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2011-29R1, dated May 24, 2012, for related information.

This MCAI may be found in the AD docket on the Internet at

<http://www.regulations.gov>.

(2) Service information identified in this AD that is not incorporated by reference may be obtained at the address specified in paragraph (m)(5) of this AD.

**(m) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Bombardier Service Bulletin 8-32-169, Revision A, dated December 16, 2011.

(ii) Reserved.

(4) The following service information was approved for IBR on August 27, 2012 (77 FR 42956, July 23, 2012).

(i) Bombardier Service Bulletin 8-32-170, dated February 25, 2011.

(ii) Bombardier Service Bulletin 8-32-172, dated March 15, 2011.

(5) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>.

(6) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on July 5, 2013.

Jeffrey E. Duven,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2013-18771 Filed 08/05/2013 at 8:45 am; Publication Date: 08/06/2013]